What is claimed is:

1. A display device in which pixels are disposed in a matrix, each of said pixels including a plurality of sub-pixels, said sub-pixels each including a static random access memory.

2. The display device according to claim 1, said sub-pixels being set in either an ON state or an OFF state.

3. The display device according to claim 2, a grayscale level being set by a function of a ratio of the maximum luminance level of each of said pixels to the sum of luminance levels of all of said sub-pixels included in the each of said pixels.

4. The display device according to claim 2, a grayscale level being set by a function of a ratio of an area occupied by each of said pixels to a total area occupied by the sub-pixels in the ON state included in the each of said pixels.

5. The display device according to any one of claims 1 to 4, said sub-pixels each including a liquid crystal display element.

6. The display device according to claim 5, said liquid crystal display element being a reflection-type liquid crystal display element.

7. The display device according to any one of claims 1 to 4, said sub-pixels each including an organic electro-luminescence display element.

8. A driving method for a display device in which pixels are disposed in a matrix, each of said pixels including a plurality of sub-pixels provided with a static random access memory, said sub-pixels being controlled to be either in an ON state or an OFF state, and a grayscale being obtained by using a ratio of an area occupied by each of said pixels to a total area occupied by the sub-pixels in the ON state included in the each of said pixels.

9. A driving method for a display device in which pixels are disposed in a matrix, each of said pixels including a plurality of sub-pixels provided with a static random access memory, said sub-pixels being controlled to be either in an ON state or an OFF state, and a

grayscale being obtained by using a ratio of the maximum luminance level of each of said pixels to the sum of luminance levels of the sub-pixels in the ON state included in the each of said pixels.

10. An electro-optical device including pixels disposed in a matrix at intersections of a plurality of signal lines and a plurality of scanning lines, each of said pixels including sub-pixels each provided with a static random access memory and an electro-optical element.

11. The electro-optical device according to claim 10, the luminance of each of said electro-optical elements having two values including a lower luminance level and a higher luminance level.

12. The electro-optical device according to claim 11, a grayscale level being set as a function of the sum of luminance levels of said electro-optical elements contained in each of said pixel.

13. The electro-optical device according to claim 11, a grayscale level being set as a function of a ratio of a total area occupied by all the electro-optical elements contained in one of said pixels to a total area occupied by the electro-optical elements which are set at the higher luminance level.

14. The electro-optical device according to any one of claims 10 to 13, said electro-optical elements being liquid crystal elements.

15. The electro-optical device according to claim 14, said liquid crystal elements being reflection-type liquid crystal elements.

16. The electro-optical device according to any one of claims 10 to 13, said electro-optical elements being organic electro-luminescence elements.

17. A driving method for an electro-optical device including pixels disposed in a matrix at intersections of a plurality of signal lines and a plurality of scanning lines, sub-pixels each provided with an electro-optical element being disposed within said pixel, said driving method comprising:

a step of supplying a data signal for controlling a luminance level of said electro-optical elements to either a higher luminance level or a lower luminance level via said plurality of signal lines; and

a step of retaining the data signal in a static random access memory disposed within each of said sub-pixels.

18. A driving method for an electro-optical device in which pixels are disposed in a matrix, each of said pixels including a plurality of sub-pixels provided with a static random access memory, said sub-pixels being controlled to either an ON state or an OFF state, and a grayscale being obtained by using a ratio of the maximum luminance level of each of said pixels to the sum of luminance levels of the sub-pixels in the ON state included in the each of said pixels.

19. An electronic apparatus comprising the display device set forth in any one of claims 1 to 7.

20. An electronic apparatus comprising the electro-optical device set forth in any one of claims 10 to 16.

[Detailed Description of the Invention]

[Reference Numerals]

1 scanning line

2 signal lines

21 lower-bit signal line

22 higher-bit signal line

3 thin-film transistors

31 lower-bit thin-film transistor

32 higher-bit thin-film transistor

4 static random access memories

41 lower-bit static random access memory

42 higher-bit static random access memory

5 reflection-type liquid crystal display elements

51 sub lower-bit reflection-type liquid crystal display element

52 sub higher-bit reflection-type liquid crystal display element

6 organic electro-luminescence display elements

61 sub lower-bit organic electro-luminescence display element

62 sub higher-bit organic electro-luminescence display element

71 glass substrate

72 poly-crystal silicon

73 gate insulating film

74 gate electrode

75 source region and drain region

76 first interlayer insulating film

77 source electrode and drain electrode

78 second interlayer insulating film

79 pixel electrode

81 adhesion layer

82 interlayer

83 electron-hole implantation layer

84 luminance layer

85 cathode

86 sealing agent